

REVIEW OF THE ORIENTAL GENUS *ANGERIANUS* DISTANT (HETEROPTERA: MIRIDAE)

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The genus *Angerianus* Distant is diagnosed and redescribed, and its recent placement in the subfamily Deraeocorinae is confirmed. The new species *A. mindanao* and *A. palawanensis* from the Philippine Islands, and *A. pallidus* from Sabah and Sarawak are diagnosed and described. Lectotypes are designated for the Distant species *A. fractus* and *A. maurus* based on syntypic material preserved in the Natural History Museum, London. Illustrations are provided for the male genitalic structures of all species, and scanning electron micrographs are presented for the scent gland ostiole and pretarsus of *A. maurus*. A key is provided which uses external features and characters of the male genitalia to distinguish the five known species.

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Key words. – Heteroptera; Miridae; Deraeocorinae; *Angerianus*; review; new species; Oriental region.

Angerianus was described by Distant (1904) to accommodate two new species, *fractus* and *maurus*, collected at Myitta in the Tenasserim Valley, Burma. The genus was placed in the tribe Dicyphini by Carvalho (1952), but Cassis (1984), in a revision of this group, moved *Angerianus* into the Deraeocorinae. Stonedahl and Cassis (1991) present character information suggesting that *Angerianus* is most closely related to the Old World genus *Fingulus* Distant. In conjunction with that study, three new species of *Angerianus* were discovered in the entomological collections of the Bernice P. Bishop Museum, Honolulu. Descriptions of these species are provided here along with redescriptions of *fractus* and *maurus*, and a key to distinguish the five known species.

All measurements are given in millimeters. Body length is measured from the apex of the tylus to the deepest point of the cuneal incisure. Abbreviations used in the locality data to denote specimen depositories correspond to the institutions listed in the acknowledgments.

SYSTEMATIC ACCOUNT

Angerianus Distant

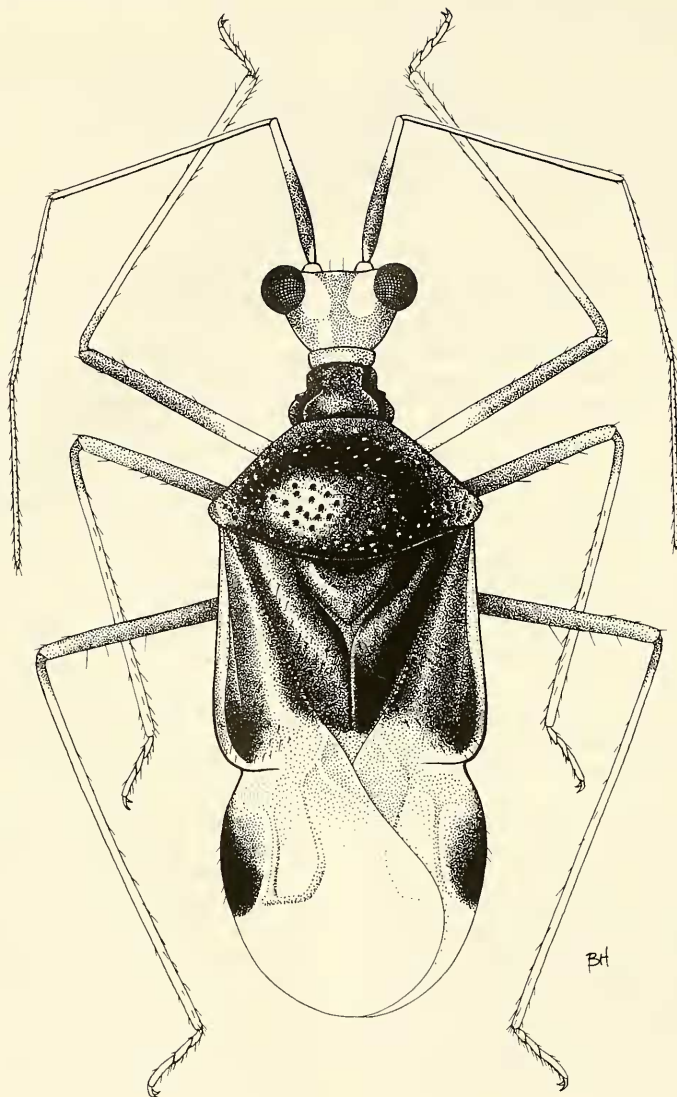
Angerianus Distant, 1904: 437-438. – Type species: *Angerianus fractus* Distant.

Angerianus: Reuter 1910: 161 (cat.); Carvalho 1952: 72 (classif., cat.), 1955: 60 (key), 1957: 182 (cat.); Cassis 1984: 166 (diag., subfam. placement).

Diagnosis. – Recognized by the head not produced anteriorly of eyes, with vertical frons and tylus; well developed cephalic neck; long first antennal segment; broad pronotal collar; lateral margins of pronotum constricted at level of anterior and posterior borders of calli; strongly deflexed hemelytra with broad, deep cuneal incisure; long, tapered femora (fig. 1); strongly protruding scent gland ostiole (figs. 2, 3); and structure of the male genitalia, especially the vesica without lobal sclerites, and no serrate plates bordering secondary gonopore.

Redescription of male. – Macropterous, length 2.19-2.77; pale brownish yellow to dark brown general coloration; dorsal surface shiny, smooth; collar and disc of pronotum finely to coarsely punctate; dorsal vestiture with moderate to dense distribution of long, pale setae, or sometimes nearly glabrous with shorter, scattered setae. Head: Vertical anteriorly, not produced distad of eyes, with weakly produced tylus; broader than long in dorsal view with vertex nearly twice as broad as dorsal width of eye; tapered posterior of eyes into distinct necklike region, with eyes well removed from anterior margin of pronotum; neck anteriorly with

Fig. 1. *Angerianus maurus*, dorsal habitus female.



transverse dorsal depression; eyes occupying nearly entire height of head in lateral view. Antennae: Long, thin, inserted well dorsad of median level of eyes; length of segment I equal to or greater than width of head across eyes; segments II-IV with moderately long, suberect, pale setae. Labium: Reaching to meso- or metacoxae; segments I-III similar in length, segment IV slightly longer. Pronotum: Strongly narrowed anteriorly and noticeably constricted at level of posterior margin of calli and at juncture of collar and calli; collar much broader than diameter of antennal segment I, flattened or weakly convex dorsally; calli confluent medially,

reaching lateral margins of pronotum, surface smooth or faintly rugulose, sometimes with long, pale setae; posterior margin of disc broadly convex, concealing most of mesoscutum and sometimes anterior margin of scutellum; scutellum elevated above resting hemelytra; metathoracic scent efferent system with strongly protruding ostiole, evaporative area not or only slightly extending dorsad of upper margin of ostiole. Hemelytra: Strongly deflexed at cuneal fracture; lateral margins nearly straight anteriorly, curving inward distally to broad, deep cuneal incisure; costal vein and claval suture marked by row of coarse punctures; cuneus

relatively long, with curved outer margin; membrane reaching well beyond apex of abdomen, with large primary cell and obsolete secondary cell. Legs: Femora elongate, tapered, broadest basally; tibiae and tarsi cylindrical, with pale, suberect setae; pretarsal claws strongly curved with prominent basal tooth (fig. 5). Genitalia: Genital capsule: Small, narrow, ventral region between paramere sockets slightly produced posteriorly; aperture large, posteriorly directed; paramere sockets asymmetrical with left socket slightly larger and ventrad of right socket. Left paramere: L-shaped with weakly to moderately produced sensory lobe; shaft long, tapered distally to blunt, sometimes truncate apex. Right paramere: Small, ovate to lanceolate, sometimes strongly narrowed distally; apex blunt. Phallosome: Short, conical, narrowly opened dorsodistally. Vesica: Composed of multilobed membranous sac surrounding distal region of ductus seminis, and simple, unmodified secondary gonopore opening into depressed area between membranous lobes. Lobes of vesica sometimes with patches of blunt tubercles, but lacking lobal sclerites. Basal region of vesica not surrounded by sclerotized skirt, and without serrate plates bordering secondary gonopore.

Female. – Macropterous, length 2.22-2.73; similar to male in general structure and coloration except as noted in species descriptions. Genitalia not examined.

Distribution. – Tropical Asia from Nepal east to Taiwan, the Philippine Islands and Sabah, and south to Java.

Discussion. – Distant (1904) placed *Angerianus* in the Division Cylaparia (Cylapinae), but Reuter (1910), uncertain of its relationships, treated this genus as incertae sedis in his classification of the Miridae. Apparently unaware of its distinct deraeocorine pretarsus and male genitalia, Carvalho (1952) moved *Angerianus* into the tribe Dicyphini (Phylinae). The correct subfamilial placement of *Angerianus* was established by Cassis (1984), who noted that members of this genus have a typical deraeocorine pretarsus, with cleft claw bases and setiform parempodia. Cassis also observed that the structure of the mesepimeric spiracle and the metaepisternal scent efferent system were like those of the Deraeocorinae and not the Dicyphini. The observations of Cassis are confirmed in the present study, and it is further noted that the male genitalic structures of *Angerianus* support its placement in the Deraeocorinae, particularly the shape of the left paramere and the depressed, unmodified secondary gonopore of the vesica.

The relationship of *Angerianus* to other deraeocorine genera is not well established. Cassis

(1984) tentatively regarded *Angerianus* as most closely related to the Hyaliodini, based primarily on the strongly protruding, tubelike auricle of the metaepisternal scent efferent system. Commenting on the similarities between *Angerianus* and *Stethoconus* Flor, Cassis questioned the placement of the later genus in the Clivinemini by Kerzhner (1967). *Stethoconus* has since been moved into the Hyaliodini by Henry et al. (1986).

In a recent revision of the Old World deraeocorine genus *Fingulus* Distant, Stonedahl and Cassis (1991, in press) suggested a possible sister group relationship between this genus and *Angerianus* based on characters of the external morphology and male genitalia. Further, these authors noted that *Fingulus* and *Stethoconus*, while superficially similar, have very different male genitalia and head morphology, indicating that they are not as closely related as originally suggested by Cassis (1984). Based on these preliminary findings, I consider *Angerianus* to be most closely related to *Fingulus*, but can say little about the relationships of these genera to other Deraeocorinae, except to suggest a possible link with the Hyaliodini.

Key to species of *Angerianus*

1. Collar and disc of pronotum with numerous coarse punctures and long, pale setae 2
- Collar and disc of pronotum with scattered fine punctures and short setae, or impunctate and appearing glabrous 4
2. Antennal segment I narrowly pale basally, brown or black distally; length of segment noticeably greater than width of head across eyes; male genitalia as in figures 12-14 *mindanao* sp. n.
- Antennal segment I darkened basally and pale distally; length of segment about equal to width of head across eyes 3
3. Fore femora mostly pale, sometimes lightly infuscated medially or rarely more extensively darkened distally; scutellum usually with large, pale spot distomedially; length of antennal segment II 1.24-1.44; male genitalia as in figures 6-8 *fractus* Distant
- Fore femora mostly fuscous, basal fourth pale; scutellum uniformly darkened, without pale spot medially; length of antennal segment II 1.02-1.17; male genitalia as in figures 9-11 *maurus* Distant
4. Pale brownish yellow general coloration; head uniformly pale; length of labium about equal to posterior width of pronotum; male genitalia as in figures 18-20 *pallidus* sp. n.
- Dark brown general coloration; head infuscated posteriad of eyes, and with dark stripe reaching from dorsal margin of antennal fos-

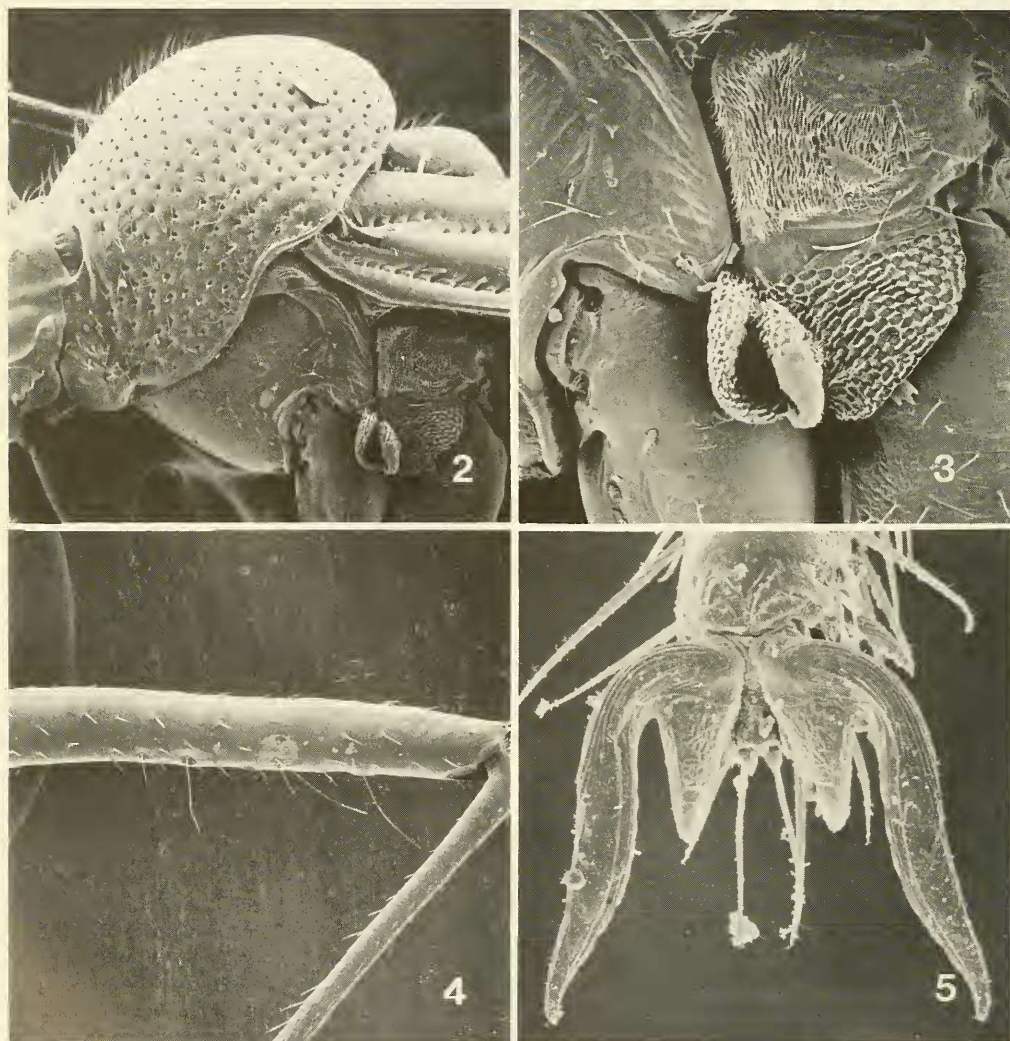
sae to posterior margin of head; length of labium much greater than posterior width of pronotum; male genitalia as in figures 15-17
 *palawanensis* sp. n.

***Angerianus fractus* Distant**
 (figs. 6-8)

Angerianus fractus Distant, 1904: 438, fig. 283. Lectotype ♀ (new designation): Label 1, 'Type, H.T.' [red-bordered disc]; 2, '*Angerianus fractus* Dist.' [handwritten]; 3, 'Tenass Vall, Myitta, (Doherty)'; 4, 'Distant Coll., 1911-383'; 5 (red label added here), 'Lectotype, *Angerianus fractus* Distant, det. by G. M. Stonedahl, 1991.' (NHML) [examined].
Angerianus fractus; Carvalho 1957: 182 (cat.).

Diagnosis. – Recognized by the coarsely punctate collar and disc of the pronotum; bicolored first antennal segment, with distal region pale; dark scutellum, usually with large, pale spot distomedially; and by the structure of the male genitalia (figs. 6-8). This species is further distinguished from *maurus* by the longer second antennal segment and mostly pale fore femora.

Description of male. – Length 2.37-2.52; yellowish brown to dark brown general coloration. Head: Width across eyes 0.66-0.70, vertex 0.30-0.33; mostly pale anteriorly and dorsally; gula and neck-like region posteriad of eyes brown or dark brown; lorum, buccula and gena usually lightly to heavily



Figs. 2-5. Scanning electron micrographs of *Angerianus maurus*. – 2, Lateral view of thorax; 3, Ostiole and evaporative area of metathoracic scent efferent system; 4, Metafemur showing trichobothria; 5, Pretarsus.

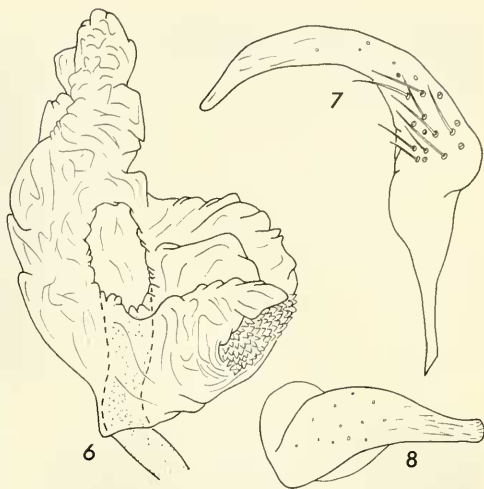
tinged with fuscous; vertex with V-shaped mark running from antennal fossae to depressed line marking anterior margin of neck. Antennae: I, length 0.62-0.70, basal half to two-thirds brown or dark brown, or in paler specimens sometimes only narrowly darkened basally, distal region pale yellow or dirty white; II, length 1.25-1.44, pale brownish yellow; III & IV, brown. Labium: Length 1.17-1.22; reaching between mesocoxae; segments I-III reddish brown, segment IV brownish yellow. Pronotum: Posterior width 1.16-1.25; collar and disc coarsely punctate; yellowish brown to dark brown, lighter specimens usually considerable darker laterally; scutellum brown or dark brown, usually with large pale spot distomedially; scent gland ostiole grayish white, much paler than surrounding pleura. Hemelytra: Dark yellowish brown to mostly dark brown – lighter specimens usually with apex of clavus, distal region of embolium and cuneus darker brown or brownish red; darker specimens with apical angle of corium and base of cuneus noticeably paler; membrane lightly to moderately tinged with fuscous basally, sometimes to level of apex of cuneus, veins brown or dark brown. Legs: Grayish yellow or brownish yellow; femora of lighter specimens usually with middle third infuscated, darker specimens usually with femora more extensively darkened distally and with base of tibiae narrowly darkened. Genitalia: Left paramere and vesica in figures 6-8.

Female. – Length 2.34-2.50; width across eyes 0.65-0.67, vertex 0.31-0.32; length of antennal segment I 0.62-0.67, segment II 1.24-1.29; length of labium 1.08-1.20; posterior width of pronotum 1.17-1.27. Similar to male in structure and color, except second antennal segment usually much shorter, and pronotum broadly pale behind calli and with distinct pale stripe medially on disc.

Distribution. – Burma, Laos, Nepal, Thailand and Vietnam.

Discussion. – This species is quite variable in general coloration, ranging from yellowish brown with limited darker brown markings to mostly dark brown (see description of male). Females are less variable than males in coloration, and are always easily distinguished from other species of *Angerianus* by the pale, median stripe on the pronotal disc.

The original description of *A. fractus* gives Myitta, Tenasserim as the type locality. Although there is no indication of the number and sex of the specimens that Distant examined, it is clear from the habitus illustration and text that he was describing the female of this species. Two specimens of *A. fractus* from the type locality are deposited in the Natural History Museum in London. The female is here designated the lectotype, but it is



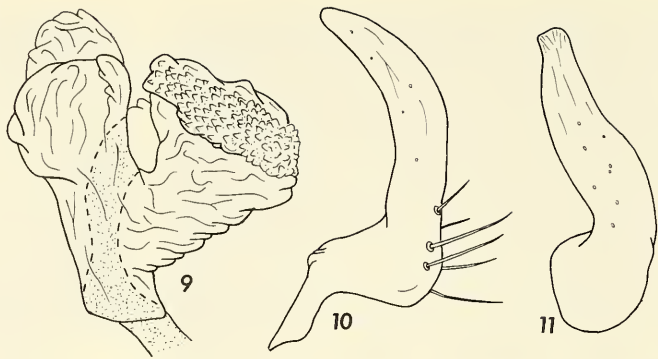
Figs. 6-8. Male genitalia of *Angerianus fractus*. – 6, Vesica; 7, Left paramere, dorsal view; 8, Left paramere, posterolateral view.

questionable whether the male specimen then becomes a paralectotype, as there is no evidence to suggest that Distant ever looked at specimens of this sex.

The head and prothorax of the lectotype have at some point been dislodged from the body and are now glued to the card point. All of the legs are missing, and only the first segment and base of the second segment of the right antenna remain.

Specimens examined. – Burma: Tenasserim: 1 ♂, same data as lectotype (NHML); 1 ♀ Dawna Hills, 2000-3000 ft, March 2-3, 1908 (NHML, Distant Coll.). – Laos: Vientiane Prov.: 1 ♀, Ban Van Eue, SE of Phou Kow Kuei, 800 m, April 14, 1965, J.L. Gressitt (BISH); 1 ♂, Ban Van Eue, Dec. 31, 1965, native collector (BISH). – Nepal: 1 ♂, Chitwan, Sauraha, Dec. 27, 1981-Jan. 9, 1982, *Shorea robusta* ('Sal') forest, on low vegetation, L. Jessop (NHML); 2 ♂, 1 ♀, Mugling, 900-1500 ft, Jan. 14-Feb. 5, 1982, mixed scrub on south facing slopes, L. Jessop (AMNH, NHML). – Thailand: Chiang Mai Prov.: 1 ♂, 1 ♀, Banna, 108 m, May 5-10, 1958, T.C. Maa (BISH); 1 ♂, 1 ♀, Chiangdao, 450 m, April 5-11, 1958, T.C. Maa (BISH); 1 ♀ Doi Surphong, Nov. 14, 1957, J.L. Gressitt (BISH); 1 ♂, 4 ♀, Fang, April 12-19, 1958, T.C. Maa (BISH); 1 ♂, Fang Hort. Exp. Strn., 550-600 m, Oct. 20, 1981 (UZMC). Trang Prov.: 1 ♂, Khaophapha, Khaochang, 200-400 m, Jan. 13, 1964, G.A. Samuelson (BISH). – Vietnam: 1 ♂, 1 ♀, Ban Me Thout, 800 m, Dec. 20-24, 1960, C.M. Yoshimoto (BISH); 1 ♀, 6 km s of Dalat, 1400-1500 m, June 9-July 7, 1961, N.R. Spencer (BISH).

Figs. 9-11. Male genitalia of *Angerianus maurus*. – 9, Vesica; 10, Left paramere, dorsal view; 11, Left paramere, posterolateral view.



Angerianus maurus Distant
(figs. 1-5, 9-11)

Angerianus maurus Distant, 1904: 438. Lectotype ♂ (new designation): label 1, 'Tenass Vall, Myitta, (Doherty)'; 2, 'Distant Coll., 1911-383'; 3 (red label added here), 'Lectotype, *Angerianus maurus* Distant, det. by G. M. Stonedahl, 1991.' (NHML) [examined].

Angerianus maurus; Carvalho, 1957: 182 (cat.).

Diagnosis. – Similar to *A. fractus*, but distinguished by the darker legs, uniformly darkened scutellum and shorter second antennal segment. Males are further distinguished by the narrower vertex, longer labium, and structure of the genitalia (figs. 9-11).

Description of male. – Length 2.19-2.37; brown to dark brown general coloration. Head: Width across eyes 0.66-0.70, vertex 0.24-0.26; brown or dark brown; frons, tylus, jugum, lorum and gena usually paler brownish yellow; vertex with broad, pale mark bordering inner margin of each eye. Antennae: I, length 0.63-0.67, basal two-thirds dark brown, distal region pale yellow or dirty white; II, length 1.12-1.17, pale brownish yellow; III & IV, brown. Labium: Length 1.06-1.10; reaching between meso- or metacoxae; segments I-III dark reddish brown, segment IV brownish yellow. Pronotum: Posterior width 1.09-1.13; collar and disc coarsely punctate; uniformly brown or dark brown; scent gland ostiole yellowish white, much paler than surrounding pleura, evaporative area sometimes lightly tinged with fuscous. Hemelytra: Brown or dark brown; anterior half of embolium, apex of corium, and basal margin of cuneus noticeably paler; membrane lightly tinged with fuscous basally, sometimes to level of apex of cuneus, veins brown or dark brown. Legs: Brownish yellow, with distal two-thirds of femora and base of tibiae usually dark brown. Genitalia: Figures 9-11.

Female. – Length 2.22-2.40; width across eyes 0.62-0.66, vertex 0.26-0.28; length of antennal seg-

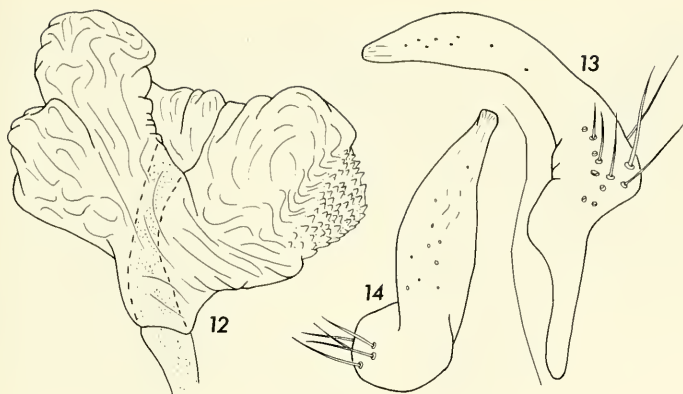
ment I 0.64-0.69, segment II 1.02-1.11; length of labium 1.06-1.13; posterior width of pronotum 1.13-1.18.

Distribution. – Widely distributed in tropical Asia from Nepal, east to Taiwan and Sabah, and south to Java.

Discussion. – Like *A. fractus*, this species was described from a unknown number of specimens collected at Myitta in the Tenasserim Valley, Burma. Four specimens apparently belonging to the original syntype series are deposited in the Natural History Museum in London. One of these is here designated the lectotype and the others become paralectotypes.

Paralectotypes. – 1 ♂ (head and pronotum missing), 1 ♀, same data as lectotype; 1 ♀, same data as lectotype except with two additional labels below specimen as follows: Label 1, 'Type, H.T.' [red-bordered disc]; 2, '*maurus* Dist.' [handwritten]. A yellow label with the following data has been added to each of these specimens: 'Paralectotype, *Angerianus maurus* Distant, det. by G. M. Stonedahl, 1991.' All paralectotypes are deposited in the Natural History Museum, London.

Specimens examined. – Cambodia: 1 ♀, Siem Reap (Angkor), Dec. 6, 1957, J. Szent-Ivany (BISH). – Indonesia: Java: 1 ♀, S Coast, Tankubanpraku, Sept. 27, 1960, forest remnant, J.L. Gressitt (BISH). – West Malaysia: Pahang: 1 ♀, Dec. 22-26, 1958, T.C. Maa (BISH). Penang: 1 ♀, Oct. 1913, G.E. Bryant (NHML); 1 ♀, Island of Penang, Baker (USNM). – Sabah: 2 ♂, Liawan, Jan. 14-19, 1959, sweeping, T.C. Maa (BISH); 1 ♀, Samawang, nr. Sandakan, July 14, 1927 (NHML). – Sarawak: 1 ♂, Merirai Valley, nr. Kapit, 30-300 m, July 1-6, 1958, T.C. Maa (BISH). – Nepal: 2 ♀, Chitwan, Sauraha, Dec. 27, 1981-Jan. 9, 1982, *Shorea robusta* ('Sal') forest, on low vegetation, L. Jessop (NHML). – Taiwan: 1 ♀, Menzendo, '1-6-33,' native pineapple field, K. Sakimura (BISH); 1 ♂, Pishan, Nov. 14, 1957, T.C. Maa (BISH). – Thailand: 1 ♂, 3 ♀, Pakchong, 100 m, NE of Bangkok, Dec. 2-3, 1957, J.L. Gressitt (BISH). Chiang Mai Prov.: 1 ♀, Chiangdao, April 5-11, 1958, T.C. Maa (BISH); 1 ♂, 1 ♀, Fang, April 12-19, 1958,



Figs. 12-14. Male genitalia of *Angerianus mindanao*. – 12, Vesica; 13, Left paramere, dorsal view; 14, Left paramere, postero-lateral view.

T.C. Maa (BISH). – Vietnam: 1 ♂, Ap Hung-Lam, 21 km NW of Dilinh, 1100 m, Sept. 29-Oct. 5, 1960, C.M. Yoshimoto (BISH); 7 ♂, 2 ♀, Ban Me Thout; 500 m, Dec. 20-24, 1960, C.M. Yoshimoto (BISH); 1 ♀, Karyu Danar, 200 m, Feb. 13-28, 1961, N.R. Spencer (BISH); 1 ♂, 1 ♀, M'Drak, E of Ban Me Thout, 400-600 m, Dec. 8-19, 1960, C. M. Yoshimoto (BISH).

Angerianus mindanao sp. n.
(figs. 12-14)

Type material – Holotype ♂: Philippine Islands: Mindanao: Davao del Sur: Galog R., Mt. Apo, 6000 ft, Sept. 26, C.S. Clagg (AMNH). – Paratypes: Philippine Islands: Mindanao: Davao del Sur: 1 ♀ (Sept. 5) and 4 ♀ (Sept. 26), same data as holotype (AMNH); 1 ♀, Mt. Apo, Batraeyon, 8000 ft, Sept. 14, C.S. Clagg (AMNH); 1 ♂, Mt. Apo, Mainit R., 6000 ft, Sept. 24, C.S. Clagg (NHML).

Additional Specimens. – Philippine Islands: Mindanao: Bukidnon: 2 ♀, Mt. Katanglad, 1250 m, Oct. 26, 1959, L.W. Quate (BISH); 1 ♂ (badly damaged, with head, hemelytra and all but one leg missing), Mt. Katanglad, 1250 m, Dec. 4-9, 1959, L.W. Quate (BISH); 1 ♀, Mt. View Colleges, 15 km NW of Valencia, April 22-23, 1968, D.E. Hardy (BISH).

Diagnosis. – Recognized by the coarsely punctate pronotal collar and disc, dark brown first antennal segment with basal sixth to one-third pale, and by the structure of the male genitalia (figs. 12-14). This species is further distinguished from *fractus* and *marus* by the longer first antennal segment and darker scent gland ostiole.

Description of male. – Length 2.40-2.56; brownish yellow to dark brown general coloration. Head: Width across eyes 0.66-0.69, vertex 0.29-0.32; brownish yellow, usually slightly darker ventrally, especially posteriad of eyes; head of darker specimens brown or dark brown, with frons and vertex paler brownish yellow. Antennae: I, length 0.80-0.84, fuscous, with basal sixth to one-third pale; II, length 1.15-1.19, yellowish brown; III & IV,

brown. Labium: Length 1.25-1.39; reaching between meso- or metacoxae; segments I-III reddish brown, segment IV yellowish brown. Pronotum: Posterior width 1.17-1.24; collar and disc coarsely punctate; uniformly yellowish brown, sometimes with collar and calli slightly darker; darkest specimens with collar, calli and margins of disc dark brown and medial region of disc lighter brown; scutellum brown or yellowish brownish; scent gland ostiole brown or yellowish brown, not or only slightly paler than surrounding pleura. Hemelytra: Brownish yellow to mostly dark brown; membrane sometimes tinged with fuscous basally, veins brown or brownish yellow. Legs: Uniformly brownish yellow, or in darker specimens, with distal half to two-thirds of femora, and sometimes base of tibiae darker brown. Genitalia: Left paramere and vesica as in figures 12-14.

Female. – Length 2.48-2.60; width across eyes 0.64-0.66, vertex 0.31-0.33; length of antennal segment I 0.77-0.84, segment II 0.99-1.06; length of labium 1.24-1.42; posterior width of pronotum 1.12-1.20.

Etymology. – Named for the island of Mindanao.

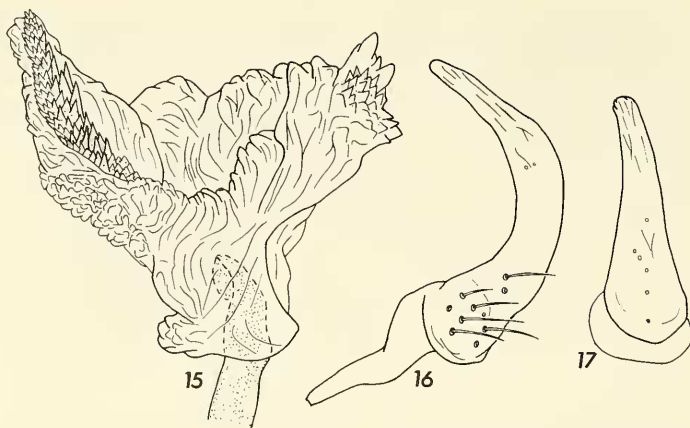
Distribution. – Mindanao, Philippine Islands.

Discussion. – This species is quite variable in general coloration, the dorsum ranging from uniformly pale brownish yellow (type and paratypes from Mt. Apo) to mostly brown or dark brown (Bukidnon specimens). The ventral parts of all the examined specimens are extensively darkened. An examination of external morphological features and the male genitalia of specimens from these two areas confirmed that they belong to a single species.

Angerianus palawanensis sp. n.
(figs. 15-17)

Type material. – Holotype ♂: Philippine Islands: Pa-

Figs. 15-17. Male genitalia of *Angerianus palawanensis*. – 15, Vesica; 16, Left paramere, dorsal view; 17, Left paramere, postero-lateral view.



lawan: Mantalingajan, Pinigisan, 600m, Sept. 6, 1961 (UZMC, Noona Dan Exp.).

Diagnosis. – Recognized by the dark brown general coloration, with legs and antennae mostly pale; head with broad, longitudinal stripe between eyes; pronotum appearing glabrous, with scattered, fine punctures on collar and disc; length of labium much greater than posterior width of pronotum, and male genitalia as in figures 15-17.

Description of male holotype. – Length 2.30; dark brown general coloration. Head: Width across eyes 0.66, vertex 0.31; pale brownish yellow, except dark brown posteriad of eyes ventrally and laterally, and with fuscous stripe between eyes extending to anterior margin of pronotum. Antennae: I, length 0.77, basal half dark yellowish brown, distal half slightly paler; II, length 1.59, pale brownish yellow; III & IV, brown. Labium: Length 1.31; reaching to posterior margin of metacoxae; segments I & II dark brown, III & IV pale brownish yellow. Pronotum: Posterior width 1.06; collar and disc with scattered fine punctures, appearing glabrous; uniformly dark brown, except somewhat paler laterally dorsad of coxal cleft; scutellum dark brown, less strongly elevated above level of hemelytra; scent gland ostiole dark brown, similar in coloration to surrounding pleura. Hemelytra: Clavus and corium dark brown, becoming slightly paler distally; cuneus brown basally, outer margin and apex broadly pale, almost clear; membrane lightly tinged with fuscous basally, veins brown, paler distally. Legs: Uniformly pale yellow. Genitalia: Figures 15-17.

Female. – Unknown.

Etymology. – Named for its occurrence on the island of Palawan.

Distribution. – Palawan, Philippine Islands.

Angerianus pallidus sp. n.
(figs. 18-20)

Type material. – Holotype ♂: Malaysia: Sarawak: Nanga Pelagus, nr. Kapit, 180-585 m, Aug. 7-14, 1958, T.C. Maa (BISH). – Paratype: Malaysia: Sabah: 1 ♂, Ranau, Sept. 30-Oct. 5, 1958, T.C. Maa (BISH).

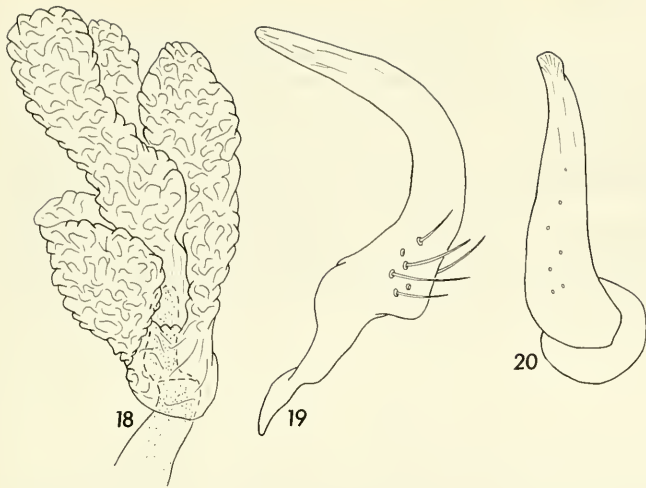
Diagnosis. – Similar to *mindanao* in size and general coloration, but distinguished by the broader head and vertex, weakly punctate pronotal disc, and structure of the male genitalia (figs. 18-20). The pale general coloration and faint punctures on the pronotal disc will distinguish *pallidus* from *fractus*, *maurus* and *palawanensis*.

Description of male. – Length 2.55-2.77; pale brownish yellow general coloration. Head: Width across eyes 0.73-0.77, vertex 0.36-0.39; uniformly brownish yellow. Antennae: I, length 0.88, pale brownish yellow; II-IV, missing. Labium: Length 1.39; reaching between mesocoxae; uniformly pale brownish yellow. Pronotum: Posterior width 1.38; brownish yellow; collar and disc with very faint, shallow punctures and short, pale setae; scutellum brown or pale grayish yellow, moderately elevated above level of resting hemelytra; scent gland ostiole dirty yellow, only slightly paler than surrounding pleura. Hemelytra: Clavus brown or grayish yellow; corium and cuneus clear pale yellow – corium of holotype lightly tinged with fuscous basally, especially bordering claval suture; membrane clear, with slight yellow coloration bordering veins. Legs: Uniformly pale brownish yellow. Genitalia: Left paramere and vesica as in figures 18-20.

Female. – Unknown.

Etymology. – From the Latin, *pallidus* (pale), referring to the pale general coloration.

Distribution. – Sabah and Sarawak, Malaysia.



Figs. 18-20. Male genitalia of *Angerianus pallidus*. – 18, Vesica; 19, Left paramere, dorsal view; 20, Left paramere, posterolateral view.

Discussion. – The paratype of this species is uniformly pale dorsally, while the holotype has the scutellum and clavus darker than the rest of the dorsum. All other features of the two specimens including the male genitalia are indistinguishable, although it is noted that the holotype is slightly larger than the paratype.

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